WHAT IS CLAIMED IS:

1. A signal processing apparatus for receiving digital signals that are continuously related and input sequentially, performing a predetermined operation on each of sequentially input digital signals, and outputting a result of the operation, the signal processing apparatus comprising:

operation means for performing the predetermined operation on an input digital signal;

high-order part extraction means for extracting a necessary high-order part by rounding off a result of the operation performed by the operation means;

difference calculation means for calculating the difference between the result of the operation performed by the operation means and the high-order part extracted by the high-order part extraction means; and

feedback means for adding, to a next input digital signal, the difference value calculated by the difference calculation means or a value obtained by performing a predetermined operation on the difference value calculated by the difference calculation means.

2. A signal processing apparatus according to claim 1, wherein when a second set of continuously-related digital signals is sequentially input after completion of inputting

of a first set of continuously-related digital signals, a difference value obtained as a result of the difference calculation performed, by the difference calculation means, on the last digital signal of the first set of digital signals or a value obtained by performing the predetermined operation on the difference value calculated by the difference means is reset to 0 or added with a particular value, and the resultant value is added, via the feedback means, to the first digital signal of the second digital signals.

3.　A signal processing apparatus according to claim 1, wherein the feedback means adds, to the next input digital signal, a value obtained by multiplying the difference value calculated by the difference calculation means by a factor smaller than 1.

4.　A signal processing apparatus according to claim 1, wherein a digital signal acquired by means of oversampling is input to the operation means.

5.　A program for use in a signal processing apparatus for receiving digital signals that are continuously related and input sequentially, performing a predetermined operation on each of sequentially input digital signals, and

outputting a result of the operation, the program causing the signal processing apparatus to function as:

operation means for performing the predetermined operation on an input digital signal;

high-order part extraction means for extracting a necessary high-order part by rounding off a result of the operation performed by the operation means;

difference calculation means for calculating the difference between the result of the operation performed by the operation means and the high-order part extracted by the high-order part extraction means; and

feedback means for adding, to a next input digital signal, the difference value calculated by the difference calculation means or a value obtained by performing a predetermined operation on the difference value calculated by the difference calculation means.

6. A program for use in a signal process apparatus according to claim 5, wherein the program causes the signal processing apparatus to also function as means for controlling the value fed back to the input digital signal such that when a second set of continuously-related digital signals is sequentially input after completion of inputting of a first set of continuously-related digital signals, a difference value obtained as a result of the difference

calculation performed, by the difference calculation means, on the last digital signal of the first set of digital signals or a value obtained by performing the predetermined operation on the difference value calculated by the difference means is reset to 0 or added with a particular value, and the resultant value is added, via the feedback means, to the first digital signal of the second digital signals.

7. A program for use in a signal process apparatus according to claim 5, wherein the program causes the signal processing apparatus to also function as means for causing the feedback means to add, to the next input digital signal, a value obtained by multiplying the difference value calculated by the difference calculation means by a factor smaller than 1.

8. A program for use in a signal process apparatus according to claim 5, wherein the program causes the signal processing apparatus to also function as means for inputting a digital signal acquired by means of oversampling to the operation means.

9. A storage medium readable by a signal processing apparatus and storing a program for use in the signal

processing apparatus for receiving digital signals that are continuously related and input sequentially, performing a predetermined operation on each of sequentially input digital signals, and outputting a result of the operation, the program causing the signal processing apparatus to function as:

operation means for performing the predetermined operation on an input digital signal;

high-order part extraction means for extracting a necessary high-order part by rounding off a result of the operation performed by the operation means;

difference calculation means for calculating the difference between the result of the operation performed by the operation means and the high-order part extracted by the high-order part extraction means; and

feedback means for adding, to a next input digital signal, the difference value calculated by the difference calculation means or a value obtained by performing a predetermined operation on the difference value calculated by the difference calculation means.

10. A storage medium storing a program for use in a signal processing apparatus according to claim 9, wherein the program causes the signal processing apparatus to also function as means for controlling the value fed back to the

input digital signal such that when a second set of
continuously-related digital signals is sequentially input
after completion of inputting of a first set of
continuously-related digital signals, a difference value
obtained as a result of the difference calculation performed,
by the difference calculation means, on the last digital
signal of the first set of digital signals or a value
obtained by performing the predetermined operation on the
difference value calculated by the difference means is reset
to 0 or added with a particular value, and the resultant
value is added, via the feedback means, to the first digital
signal of the second digital signals.

11. A storage medium storing a program for use in a
signal processing apparatus according to claim 9, wherein
the program causes the signal processing apparatus to also
function as means for causing the feedback means to add, to
the next input digital signal, a value obtained by
multiplying the difference value calculated by the
difference calculation means by a factor smaller than 1.

12. A storage medium storing a program for use in a
signal processing apparatus according to claim 9, wherein
the program causes the signal processing apparatus to also
function as means for inputting a digital signal acquired by

means of oversampling to the operation means.

13. A method for causing a signal processing apparatus to be capable of receiving digital signals that are continuously related and input sequentially, performing a predetermined operation on each of sequentially input digital signals, and outputting a result of the operation, the method comprising:

an operation step of performing the predetermined operation on an input digital signal;

a high-order part extraction step of extracting a necessary high-order part by rounding off a result obtained in the operation step;

a difference calculation step of calculating the difference between the result obtained in the operation step and the high-order part extracted in the high-order part extraction step; and

a feedback step of adding, to a next input digital signal, the difference value calculated in the difference calculation step or a value obtained by performing a predetermined operation on the difference value calculated in the difference calculation step.